AMENDMENTS TO THE CLAIMS

1. (Cancelled)

2. (Previously Amended) A method for inhibiting RNase activity of reverse transcriptase comprising the steps of:

administering neomycin to an RNA-DNA hybrid substrate wherein the neomycin binds to the RNA-DNA hybrid substrate, thereby preventing reverse transcriptase from cleaving an RNA strand of the RNA-DNA hybrid substrate.

3-5. (Cancelled)

6. (Currently Amended) The method of claim 2, wherein the neomycin to RNA-DNA hybrid substrate binding site molar ratio is 1:1.

7. (Original) The method of claim 6, wherein the neomycin inhibits reverse transcriptase induced cleavage of the substrate by 80% at the primary site.

8. (Currently Amended) The method of claim 2, wherein the neomycin to RNA-DNA hybrid substrate binding site molar ratio is 5:1.

9. (Original) The method of claim 8, wherein the neomycin completely inhibits reverse transcriptase induced cleavage of the substrate at the primary site.

10. (Cancelled)

11. (Previously Amended) A method for inhibiting HIV-1 reverse transcriptase comprising the step of:

administering neomycin to an RNA-DNA hybrid substrate, wherein the neomycin binds to the RNA-DNA hybrid substrate, thereby preventing reverse transcriptase from cleaving an RNA strand of the RNA-DNA hybrid substrate.

12-19. (Cancelled)

20. (Previously Added) The method of claim 2, wherein neomycin binds in a double helix groove of the RNA-DNA hybrid substrate.

21. (Previously Added) The method of claim 2, wherein RNA-DNA hybrid substrate is in an A-like conformation.

22. (Cancelled)

23. (Previously Added) The method of claim 11, wherein the neomycin binds in a double helix groove of the RNA-DNA hybrid substrate.

24. (Previously Added) The method of claim 11, wherein RNA-DNA hybrid substrate is in an A-like conformation.